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Radio transmitters to track merchandise are one thing, but are people ready for ID imbedded in their bodies?

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Nathan Denette/National Post
Mark Roberti, Founder and Editor of RFID Journal holds one of many products that are a radio frequency identification device or RFID on Wednesday, Nov. 27, 2007 in Toronto. The many different types of ...

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It is the technology that is everywhere and no place. It is invisibly inserted into the perky keyless remote that unlocks your car. It opens the garage door. It is wedged in the pass cards that let employees into office buildings. Subtle and controversial, the radio frequency identification device, or RFID, makes our lives more convenient in myriad small ways.

But on a larger scale, critics warn that these dime-sized radio transmitters will one day become digital tattle-tales, a tool of what privacy experts call uberveillance:

information about us gathered without our knowledge.

If this phrase, coined by philosopher Michael G. Michael, is the ultimate aim for this $4-billion industry, the 500 attendees at the RFID Journal Live Canada conference in Toronto last week were being very discreet about it. Instead, guests insisted that these microchips (or "are-fids") are used to follow widgets, not people: tracking inventory from point of origin to the time it reaches the retailer, and occasionally tracking beyond retail through global positioning.

At this conference, even the room names at the Toronto Congress Centre were more dramatic than the logistical scenarios being thrown around these inside RFID pow-wows.

Retailers such as Wal-Mart and Loblaw discussed supply chain inventory in one of two Al Waxman Rooms. In the Gordon Pinsent Room, Dave Sweeney, operations manager of Canadian Linen and Uniform Service, discussed how a chip lodged in the label of uniforms made for accurate tracking, greater automation and fewer errors. A firefighter's fire-retardant clothing, for instance, requires different treatment than, say, a food processor's.

Mundane as these seminars might sound, the potential for consumers is enormous: from tracking lost luggage to finding the source of tainted meat. "Think of the Mad Cow scares," said Mark Roberti, editor of the RFID Journal, a leading trade publication in the industry and co-sponsor of the three-day event. "With tags you could trace the disease right back to the very farm, or even the cow. Then we wouldn't have to kill so many animals, and farmers wouldn't lose their cattle for nothing."

Medical centres in the United States, Asia and Europe are seeing its benefits. At Norway's St. Olav's Hospital, self-powered RFIDs attached to technology, instruments and even patients locate items on a floor scheme in real time. They can also locate workers -- medical professionals and nurses -- who are carrying self-powered, or active, tags that pinpoint their whereabouts at any given time.

This is where the technology is entering the second generation of utility. Popular for tracking pets, the RFID is slowly creeping over to humans who have little choice: children, Alzheimer's patients, employees.

"The arguments that are winning these days involve safety, efficiency and productivity," said Ian Kerr, Canada research chair in ethics, law and technology at the University of Ottawa law faculty. "The challenge in this era is to employ this kind of technology in a way that isn't dehumanizing."

In the name of emergency, the data shadow is certainly starting to spread. At a British Petroleum oil refinery in Washington State, employees wear RFID-enabled badges in the processing area, tank farm and docks, allowing management to find them in the event of an explosion or fire.

Last month, 10 children enrolled at Hungerhill School in Edenthorpe, England, wore chipped uniforms as part of a pilot program to monitor students.

Over the summer, Alzheimer's Community Care in West Palm Beach, Fla., announced that 200 volunteers would be injected with Tic Tac-sized microchips, helping to identify patients who arrive at an emergency room in an unresponsive state. VeriChip, the company perhaps best known for "chipping" the arms of VIPs at a Barcelona nightclub with digital credit, performed the procedure.

Citing potential threat to privacy, three U.S. states have already banned human chipping, most recently California. "RFID is a minor miracle, with all sorts of good uses," said state Senator Joe Simitian. "But we cannot and should not condone forced 'tagging' of humans. It's the ultimate invasion of privacy."

RFID's roots go back to the Second World War. Britain's Royal Air Force developed "friend or foe identification," a radio-frequency recognition system that helped Allied forces tell which blips on a radar screen were enemy fighters and which were their own. As pilots flew back to their bases, radar crews sent signals from the ground, to which the planes' special transmitters responded with a code that identified them as "friendly."

By the early 1980s, the Los Alamos National Laboratory in New Mexico had come up with a tiny subdermal-friendly glass tube encasing a transmitter that kept track of farm animals. Similar technology was used in pet-tracking devices, and for the first time, in 2002, VeriChip injected a Floridian family of three, the Jacobs, later nicknamed "the Chipsons."

As the price of RFIDs dropped, they became popular with big-box stores, a more durable alternative to bar code stickers, which sometimes degrade and in turn require repeated scanning -- or worse, emit the wrong information.

The emergence of these new tags concerned Katherine Albrecht, then a Harvard doctoral candidate who had already been rallying against the privacy invasion that occasionally arose from customer loyalty programs. She is also a religious Christian who believes in the End of Days, and for whom the subdermal VeriChip could easily be

construed as the mark of the beast.

Dr. Albrecht, however, insists her mission is secular. "You don't have to be a Christian to not want Big Brother looking over your back," she says.

Spychips, the provocative book on the topic she co-wrote, earned her a tag of her own: the Erin Brockovich of RFID. The industry has portrayed her as an alarmist, but using patent applications as fodder, she often provides a startling window into the corporate imagination -- major retailers inserting transmitters inside products, unbeknownst to consumers. On a wide scale, unwitting carriers could be targeted by identity thieves, marketers or governments. "Most of the time, we don't know about these programs until we find out from whistle-blowers," Dr. Albrecht says.

But Mr. Roberti, RFID Journal editor and conference convenor, dismisses the fear. More invasive technologies, such as GSM cell-phones or toll road transponders, perturb very few because the benefits outweigh the negatives, he says.

He is also skeptical of the retail uberveillance theory. "What are the chances that competitive companies are going to share their customers' information?" he said on a bench near the Moshe Safdie Room at the Congress Centre last week, adding that such collusion wouldn't necessarily help.

"If a salesperson found out from that chip that I liked gabardine and then came up to me and said, 'Hi, Mr. Roberti, would you like to buy another gabardine jacket?' I'd get the hell out of there. It's just not worth losing customers over that."

But with the right loyalty program, they might win a few back.

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